Prince Edward Island
CANADA

Health and Wellness

# Prince Edward Island
# Blood and Body Fluid Exposure Guideline

October 2023

Department of Health and Wellness
Chief Public Health Office

## Table of Contents

## 1. INTRODUCTION

Exposure to blood and body fluids (BBF) in a community or healthcare setting (via a needlestick, sharp, or splash) is a public health concern.

These guidelines are designed for Health Care Providers involved in assessing and/or treating persons exposed to potential infections of hepatitis C virus (HCV), hepatitis B virus (HBV), or Human Immunodeficiency Virus (HIV).

## 2. GOALS

The goal of this guideline is to provide the information to support the risk assessment and clinical management of persons exposed to BBF, in order to reduce the risk of transmission of bloodborne viruses.

## 3. DEFINITIONS

**Bloodborne pathogen** - Any pathogen that can be transmitted from one person to another via blood. Pathogens may also be transmitted by other body fluids. The mode of transmission varies depending on the pathogen, the type of body fluid and the nature of the exposure.

**BBF** – Blood and Body Fluid

**BBF exposure** - An event where a person is exposed to potentially infectious blood and bodily fluids through one of the following:

- **Percutaneous** - exposure through puncture of skin by needlestick or another sharp object
- **Permucosal** - exposure through contact with mucous membranes
- **Non-intact skin** - exposure through eczema, scratches, and damaged skin
- **Sexual** – exposure through sexual activity

**CPHO** – Chief Public Health Office

**RASP** – Risk Assessment Stratificaiton Protocol to determine PEP recommendation for HIV

**Post-exposure prophylaxis (PEP)-** Short-term treatment started as soon as possible after high-risk exposure to an infectious agent such as: HIV or hepatitis B virus (HBV). The purpose of PEP is to reduce the risk of infection. Specific direction regarding PEP for HBV and HIV can be found in Appendix E. There is no PEP for HCV but treatment is available.

**SDM** - Substitute Decision Maker

## 4. IMMEDIATE POST-EXPOSURE PROCEDURE

**Needlestick:**

Allow free bleeding of the wound. Do not squeeze the wound as this may destroy surrounding tissue. Wash injured area thoroughly with soap and water. Do not use bleach.

**Mucous membranes (eye, nose mouth):**

Flush the area(s) thoroughly with copious amounts of water or normal saline solution.

**Skin:**

Wash thoroughly with soap and water. Do not use bleach.

## 5. FOLLOW UP PROCEDURE

5.1 If the exposure occurred in an occupational setting:

- Notify the Manager/Supervisor in the work area
- Initiate Workers Compensation paperwork following the incident.

The health care provider involved in assessing /treating the exposed person should:

5.2 Fill out the *Blood and Body Fluid Exposure Worksheet* (Appendix A).

5.3 If completion of sections 1 and/or 2 of the *Blood and Body Fluid Exposure Worksheet* confirms **NO significant exposure** then no futher action is required.

5.4 If completion of sections 1 and/or 2 of the *Blood and Body Fluid Exposure Worksheet indicates* significant exposure is confirmed, follow steps provided in section 3 of the *Worksheet*.

5.5 Assess the risk of the source fluid by completing the *Source Risk Assessment* (Appendix B) with the Source or the Substitute Decision Maker (SDM). This form is completed using the information available. If the source refuses testing, treat as an unknown source. Testing for the source should be ordered STAT.

- **Unknown Source** – If the source is unknown and the exposure is significant, the exposed should proceed to the nearest Emergency Department for assessment and blood work.
- **Known Source** - Complete the *Source Risk Assessment* (Appendix B). If the source is available for testing, order serology testing for the source (**needlestick source** and page QEH microbiology staff if source is a patient in the hospital).

**NOTE**: If the exposure was from a discarded needle in the community setting, PEP is not required.

5.6 If the source is considered to be high risk order the“needle stick exposed” panel in CIS**.** If ordering from a community setting order the following tests: ALT, ALP, HBAB, HBAG, HCV, HBC, HIV, CBC, Urea, Creatinine, Electrolytes, Total Bilirubin.

5.7 Complete the treatment section (Tables 1 and 2) of the *Body Fluid Exposure Worksheet.*

5.8 Provide exposed person with the *Blood and Body Fluid Exposure Fact Sheet* (Appendix C).

5.9 Provide support, education and counselling to the exposed person.

5.10 **Arrange for follow up testing as required.**

## 6. ATTENDING PHYSICIAN / DELEGATE

6.1 Review Tables 1 and 2 of the *Blood and Body Fluid Exposure Worksheet.*

6.2 Review RASP decision tool (Appendix D) for HIV PEP.

6.3 If HIV PEP is required:

- Prior to ANY PEP (Post Exposure Prophylaxis) medication being started, perform a **urine pregnancy test** on any woman of child-bearing age.
- A full review of current medications is required for potential interactions with HIV PEP medications. HIV PEP medication recommendations are found in *Post-Exposure Prophylaxis (PEP) Recommendations* for Significant *Exposure to Blood and Body Fluids* (Appendix E). Seven day starter packs are available in all provincial Emergency Departments.
- Notify the CPHO if PEP is required.
- Prescriptions for the remaining 21 days of treatment should be faxed to the Provincial Pharmacy using the appropriate fax form. If the exposure is work related, Workers Compensation paperwork must be filed for coverage of the cost of medication.
- Advise patients to have F/U bloodwork done in 3 months

6.4 If Hepatitis B PEP is required:

6.4.1 Refer to *Post-Exposure Prophylaxis (PEP) Recommendations for Significant Exposure to Blood and Body Fluids* (Appendix E). The initial dose of HBIG and Hep B vaccine is given in the emergency department.

6.4.2 Instruct client to contact Public Health Nursing for completion of the vaccine series.

## 7. SEXUAL EXPOSURE

For a sexual assault please see the Sexual Assault orderset for testing instructions.
PEP for HIV and HBV would be as noted in Post-Exposure Prophylaxis (PEP) in Appendix E Recommendations for Significant Exposure to Blood and Body Fluids.

## 8. APPENDICES

A. Blood and Body Fluid Exposure Worksheet

B. Source Risk Assessment

C. Blood and Body Fluid Exposure Fact Sheet

D. Risk Assessment Stratification Protocol (RASP) for use by health care professionals when discussing postexposure prophylaxis for HIV exposure

E. Post-Exposure Prophylaxis (PEP) Recommendations for Significant Exposure to Blood and Body Fluids

F. Provincial Pharmacy Fax Form

## REFERENCES

British Columbia Centre for Excellence in HIV/AIDS (BC-CfE). (2017) HIV post-exposure prophylaxis (pep) guidelines. May 2017. Accessed Aug13, 2017 at: http://cfenet.ubc.ca/sites/default/files/uploads/publications/centredocs/pep_guidelines_final_may_2017.pdf

British Columbia Centre for Excellence in HIV/AIDS (2009). Therapeutic Guidelines: Accidental Exposure Guidelines. Accessed April 22, 2013 at: http://www.cfenet.ubc.ca/sites/default/files/uploads/docs/Accidental_Exposure_Therapeutic_Guidelines_Nov82010.pdf

Tan, D.H.S., et al. (2017). Canadian guideline on HIV pre-exposure prophylaxis and nonoccupational postexposure prophylaxis. *CMAJ* November 27;189:E1448-58. doi: 10.1503/cmaj.170494

Capital Health (2014). Accidental Exposure to Blood and/or Potentially Infectious Body Substances-Employee/Physician (CH 15-070). Halifax, NS.

Centers for Disease Control and Prevention (2013). CDC guidance for evaluating health-care personnel for hepatitis B virus protection and for administering post-exposure management. Morbidity and Mortality Weekly Report, 62, No 10, 1-16.

Centers for Disease Control and Prevention (2013). Updated U.S. public health service guidelines for the management of occupational exposures to HIV and recommendations for post exposure prophylaxis. Infection Control and Hospital Epidemiology, 34, No. 9, 875-892.

Centers for Disease Control and Prevention (2005). Updated U.S. public health service guidelines for the management of occupational exposures to HIV and recommendations for post exposure prophylaxis. Morbidity and Mortality Weekly report, 54, No. RR-9, 1-17.

Centers for Disease Control and Prevention. (2001). Updated U.S. public health service guidelines for the management of occupational exposures to HBV, HCV, and HIV and recommendations for post exposure prophylaxis. Morbidity and Mortality Weekly Report, 50, No. RR-11, 1-52.

Manitoba Communicable Disease Control (2009). Integrated Post-exposure Protocol for HIV, HBV, & HCV: Guidelines for Managing Exposures to Blood and Body Fluids (2009) Accessed May 10, 2013 at: http://www.gov.mb.ca/health/publichealth/cdc/protocol/hiv_postexp.pdf

Mountain Plains AIDS Education and Training Center. (2014). PEP steps: A quick guide to post-exposure prophylaxis in the health care setting. Accessed February 12, 2015 at: http://www.mpaetc.org/MPAETC/media/MPAETC/Product%20Downloads/pep_steps.pdf

Ontario Hospital Association and the Ontario Medical Association. (2012). Blood-Borne Diseases Surveillance Protocol for Ontario Hospitals.

Public Health Agency of Canada. (2002). Infection control guidelines: Prevention and control of occupational infections in health care. Canada Communicable Disease Report, Volume 28S1, 1-264.

Appendix A **Blood & Body Fluid Exposure Work Sheet**

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## Exposed Person/Source Demographic Data

Name of Exposed_____ MRN_____

Date/Time of Exposure_____

Geographic location where exposure occurred_____

Accident/Injury workers comp report filled out? Yes___ No___ N/A____

Source Name (if known) _____ MRN_____

## Section 1: Significance of Exposure. Select type of exposure(s) that apply.

___ Percutaneous (any puncture)
___ Non-intact Skin (cut, chapped, abraded, dermatitis)
___ Mucous membranes (eyes, mouth, nose, vagina, anus)

- **Any of the above, proceed to section 2.**

___ None of the options listed in the left column.

- **No PEP is required. No further action required.**

## Section 2: Fluid Type Exposure Select the fluid risk that applies.

___ **Low risk fluid**:

Saliva, sputum, nasal secretions, sweat, tears, urine, feces, vomit or screen blood product are low risk if not contaminated by visible blood.

- **No further action required.**

___ **High risk fluid**:

Blood, tissue, genital, amniotic, cerebrospinal fluid (CSF), pleural, synovial or any fluids with visible blood.

- **Proceed to section 3.**

## Section 3: Exposure Severity Select the severity of exposure that applies

**Blood Exposure**

__**3** More severe (hollow bore needle, deep puncture, blood visible on device, needle used in artery or vein)

__**2** Less severe (solid needle, superficial scratch)

**Non intact skin/mucous membrane exposure**

__**2** Large volume (greater than 5 mls, duration greater than 5 minutes, large area exposed)

__**1** Small volume (less than 5 mls, duration 5 minutes or less, small area exposed)

- **Check the corresponding number in Table 1 (end of document).**
- **Continue to section 4.**

## Section 4: Exposed Hepatitis B status.

| | | |
|---|---|---|
| ___**0 Immune or HepB Positive**<br>HBsAb greater than 12 IU/L at any time or has had 3 dose series Skip section 5<br>**Go to section 6** | ___ **4 Susceptible**<br>HBsAb (antibodies) less than 12 IU/L, did not receive 3 dose series<br>**Transfer # to Table 2 and continue to section 5** | ___**5 Pending**<br>Results for HBsAb and HBsAg pending if past results unavailable<br>**Transfer # to Table 2 and continue to section 5** |

## Section 5: Source Hepatitis B Status – refer to Source Risk Assessment.

| | | |
|---|---|---|
| ___ **Negative**<br>Source is HBsAg negative within the last 3 months and has no risk factors according to the Source Risk Assessment form.<br>No Hep B PEP needed.<br>**Continue to Section 6.** | ___**I Infected**<br>+ HBsAg or risk factors identified in the Source Risk Assessment form or source unknown but a high risk situation or area.<br>**Transfer letter to Table 2 and continue to Section 6.** | ____**P Pending**<br>Blood work to be drawn on the Source for HBsAg if past results not available.<br>**Transfer letter to Table 2 and continue to Section 6.** |

Appendix A **Blood & Body Fluid Exposure Work Sheet**

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| **Section 6: Source HIV status- refer to Source Risk Assessment.** | | |
|---|---|---|
| ___ **Negative**<br>HIV screen negative and no risk factors according the Source risk assessment form.<br>**Proceed to Table 2.** | ___**F Risk factors**<br>Risk factors identified and HIV screening results unknown or source unknown<br>**Transfer letter to Table 1.** | ___**H Positive HIV status**<br>**Transfer letter to Table 1.** |

## Table 1. HIV PEP Medication Recommendations

Select the number from Section 3 and the letter from Section 6 wherever they appear in the table below. **When 2 boxes in the recommendation row are checked, follow the treatment provided in the row to the right.**

| Select the number from **Section 3.** | Select the letter from **Section 6.** | **HIV PEP Recommendations** |
|---|---|---|
| Exposure Severity | Source HIV Status | |
| ___ 1 | ___ F | HIV PEP NOT recommended – Exposure does not pose a known risk for HIV transmission |
| ___ 1 | ___ H | Extremely low risk for HIV transmission |
| ___ 2 | ___ F | PEP is optional and should be based on an individual basis and a discussion between the person exposed and the Health Care Provider.<br>**Appendix D for recommendations** |
| ___ 3 | ___ F | |
| ___ 2 | ___ H | Increased risk for HIV transmission, PEP should ideally be given within 2 hours after exposure but may be given up to 72 hours from the time of exposure. HIV PEP should be determined on a case by case basis between the exposed person and Health Care Provider. **Appendix D for recommendations** |
| ___ 3 | ___ H | |

## Table 2. Hepatitis B PEP Recommendations

Select the number from Section 3 and the letter from Section 6 wherever they appear in the table below. **When 2 boxes in the recommendation row are checked, follow the treatment provided in the row to the right.**

| Select the number from **Section 4.** If no number applies No Hepatitis B PEP required. | Select the letter from **Section 5.** | **Hepatitis B PEP or Vaccine Recommendations** |
|---|---|---|
| Exposed HBV status | Source HBV status | |
| ___0 | | Exposed person is already Hepatitis B immune or disease positive. No Hepatitis B PEP or immunization is required. |
| ___ 4 | ___ P | Results pending on Exposed and/or Source HBV testing. If results will not be available within 24 hours consider Hepatitis B PEP.<br>**Appendix D for recommendations.** |
| ___ 5 | | |
| ___ 4 | ___ I | Exposed is susceptible or results pending and Source is infected. Recommend Hepatitis B PEP (HBIG and HBV vaccine if Exposed is non-immune).<br>**Appendix D for recommendations** |
| ___ 5 | | |

**Completed by:**_____ **Date & Time:** _____

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Appendix B

## Source Risk Assessment

Exposed name:_____ Exposed MRN: _____

Source name: _____ Source MRN:_____

Source Information Collected by: _____

Location of exposure_____ Date: _____

How was the Information from the Source Risk assessment completed:

☐ From Source ☐ Source unable/unavailable ☐ From substitute decision maker (SDM) ☐ Source Unwilling

**PREVIOUS SOURCE TESTING**

Known Source Testing History for (testing done within the last 3 months can be used)

Hepatitis B ☐ Positive HBAG ☐ Negative HBAG ☐ HBAG not tested in last 3 months

Hepatitis C ☐ Positive HCV screen ☐ Negative HCV screen ☐ HCV screen not tested in last 3 months

HIV ☐ Positive HIV ☐ Negative HIV ☐ HIV not tested in last 3 months

| **Section #1 Risk Factors** | | | |
|---|---|---|---|
| **Check the source patient response to these questions** | No | Yes | Uncertain |
| 1. Have you ever been told you are HIV positive? | | | |
| 2. Have you ever been told you have Hepatitis B? | | | |
| 3. Have you ever been told you have Hepatitis C? | | | |
| 4. Have you had sexual or blood contact with a person who had a positive blood test for HIV? | | | |
| 5. Have you had sexual or blood contact with a person who had a positive blood test for Hepatitis B or C? | | | |
| 6. Have you ever injected non-prescription drugs? | | | |
| 7. Have you ever had sex with someone who injects non-prescription drugs? | | | |
| 8. Have you ever lived on the streets or shared drugs or had sex with someone living on the street? | | | |
| 9. Have you ever traded money for sex or drugs? | | | |
| 10. Are you a male who has sex with other males? | | | |
| 11. Have you had unhygienic tattoo or body piercing (meaning tattoos or piercings done with needles used on two or more individuals without sterilization or from amateur or mobile operators? | | | |
| 12. Have you or a member of your household ever lived in Sub-Saharan Africa, South Asia or Southeast Asia? | | | |

**Section #2: Based on the above formation provided, the source has been designated the following risk level:**

☐ **No Risk Source** (no risk factors identified) answered NO to all above questions

☐ **Low Risk Source** (only answered yes to question 11)

☐ **High Risk Source** (identified risk factors and/or known HIV, Hep B, Hep C positive, answered YES to one or more questions

Obtain verbal consent from source. Order testing if Source is low risk or high risk.
Information from this form to be used for section 5 and 6 of the Blood and Body Fluid Exposure Worksheet.

Appendix C **Blood and Body Fluid Exposures Fact Sheet**

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## What is an exposure?

An exposure to infected blood, tissue or other potentially infectious body fluids can occur by a puncture from a used needle or by a cut with a sharp object that has had contact with blood and body fluids. It can also occur after a large splash that involves contact with mucous membranes (eyes, nose, mouth) or significant areas of skin that is chapped or broken. An exposure potentially increases the risk of acquiring Hepatitis B, Hepatitis C and HIV.

Body fluids capable of transmitting Hepatitis B, C, and/or HIV:

- Blood
- Breast Milk
- Semen
- Vaginal Secretions
- Other fluids that surround joints/organs in the body

The following body fluids do not pose a risk of transmitting Hepatitis B, Hepatitis C, and HIV unless they contain visible blood:

| | | | |
|---|---|---|---|
| Urine | Nasal secretions | Feces | Sputum |
| Saliva | Vomit | Tears | Sweat |

The risk of infection with Hepatitis B, Hepatitis C, or HIV is dependent on:

- the amount of fluid you've been exposed to → more fluid = higher risk
- the amount of time you were in contact with the fluid → more time = higher risk
- the person you've been exposed to → the more ill with the disease (Hepatitis or HIV) = higher risk
- the depth of the wound → deeper wound = higher risk
- the type of device → injury with a hollow bore, blood-filled needle = higher risk
- the type of fluid you've been exposed to → blood = higher risk

## What should you do when you've had an exposure?

First aid:

- Wash the injured/exposed area well with soap and water.
  - For a splash to your eyes, flush with water or saline solution.
  - For a mucous membrane exposure (mouth or nose) or skin exposure, flush with water.

- Report the injury to your supervisor if it was an occupational injury and begin the workers compensation paper work.

Appendix C **Blood and Body Fluid Exposures Fact Sheet**

## Do I need to go to the ER?

It is advisable you visit the ER if:

- the source is known to be HIV (+), or has risk factors for HIV
- the source is known to be Hep B (+) and you have never been immunized for Hepatitis B or have been told you are a "non-responder"
- the source of the blood/body fluid is unknown
- you have had a "high-risk" exposure:

  → a deep, percutaneous injury

  → injury with a device that was inserted directly into the patient's artery or vein

  → injury with a large bore, hollow needle

In the ER your exposure will be evaluated to determine if there is a need for post-exposure prophylaxis (PEP), which is a medication that is given to reduce the risk of infection with HIV and or Hepatitis B. The evaluation considers the type of exposure/injury you have had and the patient you have been exposed to. PEP should be given as soon as possible after a high risk exposure.

In order to protect yourself and others, please refrain from the following until serology results of the person you've been exposed to are known:

- Unprotected sex
- Donating blood, semen, organs or tissues
- Sharing personal hygiene items such as toothbrush/razor/nail files

## What follow-up will be done?

A Health Care Provider will investigate the injury and circumstance and arrange to have blood work completed on you and the source, if available. Depending on the sources blood work results, you may be advised to have follow-up blood work done 1 and 3 months after the exposure; this will also be the case if you have been exposed to an unknown source. A Health Care Provider will contact you to advise of all blood work results.

Appendix D



# Risk Assessment Stratification Protocol (RASP) to help patients decide on the use of postexposure prophylaxis for HIV exposure

Les Vertesi, MD, MHSc

SEE ALSO PAGES 35, 36 AND 38.

## Introduction

All risks are relative. The response of most people to risks however, comes not from rational processes, but from fear. Situations in which HIV prophylaxis must be considered put emergency physicians into a difficult position. Guidelines are fine in theory, but in practice, people exposed to something as fear-inspiring as HIV are usually not in a position to make logical choices. The Risk Assessment Stratification Protocol (RASP) (Fig. 1) uses the principles of Bayesian analysis to give people a way to make decisions under these circumstances, by putting their risk into perspective alongside risks that we all take in our everyday lives. Table 1 is a useful guide to help patients understand what various levels of risk really mean.

There is one important caveat. Probabilities look like numbers and therefore tend to be used as measurements. They are not, however, really numbers, but estimates, which means they cannot have exact values. To illustrate, probabilities of 1/1000 and 1/1100 are for all intents and purposes the same thing. When discussing probabilities of this nature, only large differences are important. This protocol assumes that the minimum relevant difference for decision-making purposes is one order of magnitude (a factor of 10). So even if some of the values in the RASP formula are not precise, it makes little difference because they would need to be out by a factor of 10 to substantially alter any decisions.

## Using the RASP

Steps A, B, and C assess the probability of exposure to the virus by assigning a score to each of the major risk factors. Bayes' theorem tells us that probabilities that occur in sequence are multiplied together to give a net probability, so the product of these 3 scores (A × B × C) forms the denominator for the "Basic Risk." Step D gives us a multiplier, or numerator for the Basic Risk. Together they give us the "Total Risk" of contracting HIV from the given exposure. The values used in Steps A to D have been adjusted to reflect as closely as possible the actual experience in an average Canadian community. In places with a different prevalence of disease, these would need to be modified.

### *Example 1*

A hospital worker is pricked by a needle from a known HIV carrier who does not have clinical AIDS. In this case, value A = 10, value B = 1, and value C = 100. A × B × C = 1000 so the Basic Risk is 1/1000. Assuming we are dealing with a small-bore 25-g needle, the multiplier is 3, so the Total Risk is 3/1000 or approximately 1 in 300. This is a small risk, but definitely worth treating.

### *Example 2*

A hospital worker is pricked by an old needle from a hospital garbage tray of unknown age, but probably at least 24 hours old. The wound is small, and there is no bleeding. In this case value A = 1000, value B = 100 and value C = 200. The Basic Risk then is 1 in 20 000,000. Even if this is a large-bore 18-g needle (modifier value = 5), the Total Risk is still only 1 in 4 million, about equal to your lifetime risk of being on a bridge when it collapses. This exposure is not worth treating.

The treatment thresholds suggested in Table 2 are merely suggestions but they follow the principle that if

From the Royal Columbian Hospital, New Westminster, BC

Submitted: Nov. 12, 2001; final submission: Feb. 11, 2002; accepted: Mar. 1, 2002



. ?F><?2565 7A? = 9CC@B+!!FFF 42 = 3A:586 ?A8!4?A6 /0 255A6BB+ #&$ #) ( $& %% ?> #( , @A $"#* 2C #&+#%+"% BD3;64C C? C96 -2 = 3A:586 - ?A6 C6A = B ?7 DB6 2E2:<23<6 2C
9CC@B+!!FFF 42 = 3A:586 ?A8!4?A6!C6A = B 9CC@B+!!5?: ?A8!#" #"#)!1#&*#*"%'""""*##%

| **Step A. Identify source population (choose one):** | **Score** |
|---|---|
| Known HIV carrier: | |
| Acute AIDS illness* | 1 |
| Asymptomatic | 10 |
| Unknown HIV status: | |
| High-risk situation† | 100 |
| Low-risk situation (other) | 1000 |

**A value = _____**

| **Step B. Identify inoculum type (choose one):** | |
|---|---|
| Fresh blood | 1 |
| Body fluids at risk (e.g., semen) | 10 |
| Dried old blood | 100 |
| Low-risk secretions (tears, saliva, urine) | 1000 |

**B value = _____**

| **Step C. Identify method of transmission (choose one):** | |
|---|---|
| Intravenous | 1 |
| Deep intramuscular | 10 |
| Deep transcutaneous with visible bleeding at site | 100 |
| Superficial transcutaneous with no visible bleeding | 200 |
| Mucosal contact only | 500 |
| Intact skin | 1000 |

**C value = _____**

**Total score (Z) = A × B × C = _____ AND Basic risk = 1 / Z = _____**

---

| **Step D. Estimate volume of inoculum (choose one):** | **Modifier** |
|---|---|
| Massive (e.g., transfusion) | 100 |
| Measurable ( > 1 mL) | 10 |
| Moderate (large-bore hollow needle > 22 g) | 5 |
| Small (small-bore hollow needle < 22 g) | 3 |
| Trace surface only (e.g., suture needle) | 1 |

**Total risk = Basic risk × Modifier (D) = _____**

*End-stage AIDS, hospitalized, known high-viral load
†Suspected HIV, injection drug user, unknown needle with high local prevalence of HIV

**Fig. 1. Risk Assessment Stratification Protocol (RASP) for possible HIV exposure**



. ?F><?2565 7A? = 9CC@B+!!FFF 42 = 3A:586 ?A8!4?A6 /0 255A6BB+ #&$ #) ( $& %% ?> #( , @A $"#* 2C #&+#%+"% BD3;64C C? C96 -2 = 3A:586 - ?A6 C6A = B ?7 DB6 2E2:<23<6 2C
9CC@B+!!FFF 42 = 3A:586 ?A8!4?A6!C6A = B 9CC@B+!!5?: ?A8!#" #"#)!1#&*#*"%'""""*##%

**Table 1. Risks in everyday life**

| | |
|---|---|
| **Risk of dying in the next 12 months** | |
| Overall risk of dying **in the next 12 months** (all causes) | 1/3 000 |
| Specific causes of death **in the next 12 months** | |
| • from a lightning strike | 1/2 000 000 |
| • in an accident in your bathtub or shower | 1/1 000 000 |
| • from a previously unknown allergy to a prescribed drug | 1/1 000 000 |
| • by choking to death on food | 1/160 000 |
| • in a bicycle accident (if you own a bicycle) | 1/130 000 |
| • from toxic shock if you use tampons | 1/100 000 |
| • by drowning | 1/50 000 |
| • from a fire | 1/50 000 |
| • as a pedestrian hit by a car or truck | 1/40 000 |
| • in a work-related accident (office workers) | 1/37 000 |
| • from a fall | 1/20 000 |
| • in a work-related accident (overall) | 1/11 000 |
| • by being murdered | 1/11 000 |
| • while jogging (average 2 h/wk) | 1/10 000 |
| • in a road accident | 1/6 000 |
| • from any kind of accident | 1/3 000 |
| **Other risks** | |
| • risk of dying on your next commerical jet flight | 1/5 000000 |
| • lifetime risk of being on a bridge when it collapses | 1/4 000 000 |
| • risk of dying if you get influenza | 1/5 000 |
| • risk of being diagnosed with cancer in the next 12 months (overall death rate 50%) | 1/3 600 |
| • risk of being diagnosed with lung cancer in the next 12 months if you are (or were) a smoker (overall death rate about 90%) | 1/250 |
| • risk of having a heart attack in the next 12 months if you are over 35 years of age | 1/77 |

Adapted from Laudan L. *The Book of Risks: Fascinating Facts About the Chances We Take Every Day*; John Wiley & Sons Inc.; 1994.

**Table 2. Risk level and treatment recommendation**

| Risk level | Suggested treatment |
|---|---|
| < 1/1000 | Definitely indicated |
| 1/1000–1/10 000 | Recommended but optional |
| 1/10 001–1/100 000 | Optional but not recommended |
| >1/100 000 | Not indicated |

something reasonable can be done to minimize risks that are greater than those encountered in daily life, it should be done. For example, our chance of being hit and killed by a car may not be enough to fret about, but it is certainly enough for us to take reasonable precautions, such as using crosswalks as long as they are not too far out of our way. On the other hand, trying to take precautions against being struck by lightning makes no sense because that may involve actions that are at least as risky as the problem we are trying to avoid. Antiretroviral therapy is not without side effects, and even if these are not lethal, they are frequent enough to make compliance an issue. By giving the risk of HIV exposure a numeric instead of a Yes/No value, patients gain the ability to make reasoned choices particular to their own situation, should they choose to do so.

**Competing interests:** None declared.

**Correspondence to:** Dr. Les Vertesi; les@vertesi.com



. ?F><?2565 7A? = 9CC@B+!!FFF 42 = 3A:586 ?A8!4?A6 /0 255A6BB+ #&$ #) ( $& %% ?> #( ,@A $"#* 2C #&+#%+"% BD3;64C C? C96 -2 = 3A:586 - ?A6 C6A = B ?7 DB6 2E2:<23<6 2C
9CC@B+!!FFF 42 = 3A:586 ?A8!4?A6!C6A = B 9CC@B+!!5?: ?A8!#" #"#)!1#&*#*"%'""""*##%

Appendix E **Post-Exposure Prophylaxis (PEP) Recommendations**

Prince Edward Island CANADA Health and Wellness

## HIV Post-Exposure Prophylaxis (PEP) – Please notify the CPHO of PEP initiated in the ER

A 7 Day starter pack is available at QEH and PCH Emergency Departments free of charge to exposed persons. The medications are Raltegravir 400mg BID and Truvada 1 tab daily. If there is no primary health care provider please prescribe the remaining 21 days of PEP using the Provincial Pharmacy Fax Form (Appendix F) or a regular prescription pad and fax to the Provincial Pharmacy at 902-368-5001.
If PEP is started & source later determined to be HIV negative, PEP should be discontinued.

## Hepatitis B Post-Exposure Prophylaxis (PEP)

| | | |
|---|---|---|
| Hepatitis B Immune Globulin (HBIG) | IM dose 0.06 mL/kg | Ventrogluteal/Vastus Lateralsis[a] |
| Hepatitis B vaccine | IM dose 1ml | Deltoid[a] |

HBIG should be administered in the ER as well as the first dose of HB vaccine. Refer to the local Public Health Nursing office for the remaining doses.
[a]Hepatitis B vaccine should always be given in the deltoid. HBIG should be given in larger muscles to accommodate larger volumes.

**Additional laboratory testing**

• Baseline evaluation of individuals beginning HIV PEP should include laboratory assessment of hepatic and renal function, evaluation for sexually transmitted infection (STI) and hepatitis infection, and subsequent appropriate management.
• Ongoing laboratory monitoring of biochemistry and hematology during HIV PEP is advised only for those with baseline laboratory abnormalities, or in those who develop signs or symptoms of organ dysfunction or medication-related adverse effects during therapy.
If the exposed person must continue PEP for the full 28 days and tolerability to the initial PEP therapy is problematic an alternative regimen may be considered. For further information contact the Provincial Infectious Disease consultant.

**Suggested evaluation at baseline, during and after HIV post-exposure prophylaxis**

| Test | Baseline | Week 2 | 3 months |
|---|---|---|---|
| HIV testing | X | | X |
| Test Hepatitis A immunity (hepatitis A total antibody) | X | | |
| Hepatitis B screen (surface antigen, surface antibody, core antibody) | X | | X^^ |
| Hepatitis C screen (hepatitis C antibody) | X | | X |
| Complete blood count | X | | |
| Alanine aminotransferase | X | X** | |
| Serum creatinine | X | X** | |
| Pregnancy testing (if appropriate) | X | | |
| Screening for gonorrhea and chlamydia (urine NAAT; throat and rectal swabs culture or NAAT; test anatomic sites depending on type of sexual activity reported) | X* | | X* |
| Syphilis serology | X* | | X* |

*If exposure due to sexual assault
**Suggested if abnormal at baseline or symptomatic.
^^ If not immune

# PRINCE EDWARD ISLAND DRUG COST ASSISTANCE PROGRAM

**CONFIDENTIAL FAX**

To: **Provincial Pharmacy**
**P.O. Box 2000, 16 Fitzroy Street**
**Charlottetown, PE C1A 7N8**

**Phone: 902-368-4947**
**Fax: 902-368-5001**

From: (Name)_____ **Phone:** _____

(Address)_____ **Fax:** _____

(Postal Code)_____

**Patient Name:** _____

**PEI Personal Health Number:** |__|__|__|__|__|__|__|__|__|__|

**Patient Address:** _____

_____ **Postal Code:** _____

**Prescriber Certification**

This prescription represents the original of the prescription drug order.
The pharmacy addressee noted above is the only intended recipient and there are no others.
The original prescription has been invalidated and securely filed, and it will not be transmitted elsewhere at another time.

**Physician Name (print name):** _____

**Physician Signature:** _____ **Date:** _____